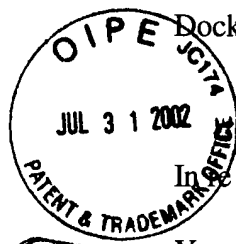


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9-11-2



Docket No.: 5916/FET/FET/DV

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In Application of

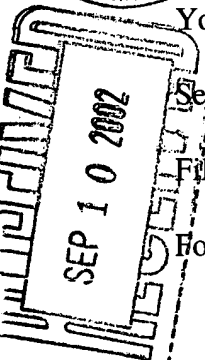
Young Joseph PAIK

Serial No. 09/998,384

Filed: November 30, 2001

For: FEEDFORWARD AND FEEDBACK CONTROL FOR CONDITIONING OF
CHEMICAL MECHANICAL POLISHING PAD

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Group Art Unit: 2812
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Examiner:

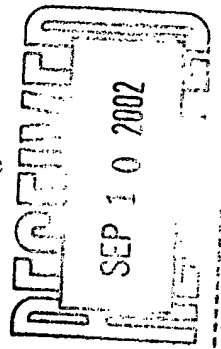


INFORMATION DISCLOSURE STATEMENT

Honorable Commissioner for Patents
Washington, D.C. 20231

Sir:

In accordance with the provisions of 37 C.F.R. 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the documents listed on the attached form PTO-1449. It is respectfully requested that the documents be expressly considered during the prosecution of this application, and that the documents be made of record therein and appear among the "References Cited" on any patent to issue therefrom.



This Information Disclosure Statement is being filed within three months of the U.S. filing date OR before the mailing date of a first Office Action on the merits. No certification or fee is required.

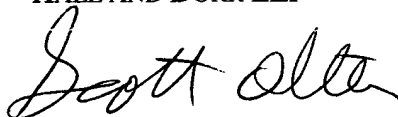
This submission does not constitute a representation that a search has been made or that no better art exists and does not constitute an admission or representation that any of the listed documents is material or constitutes prior art. If it should be determined that any of the listed documents does not constitute prior art under the United States law, Applicants reserve the right

to present to the Office the relevant facts and law regarding the appropriate status of such document.

No certification or fee is believed to be required. However, the Commissioner is hereby authorized to charge any additional fees should any be required for this submission, or credit any overpayment to deposit account no. 08-0219.

Respectfully submitted,

HALE AND DORR LLP

A handwritten signature in cursive script, appearing to read "Scott Alter".

Scott M. Alter

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Date: 7/31/02

INFORMATION DISCLOSURE CITATION IN AN APPLICATION

(PTO-1449)



ATTY. DOCKET NO.
5916/FET/FET/DV

SERIAL NO.
09/998,384

APPLICANT
Young Joseph PAIK

FILING DATE
November 30, 2001

GROUP
2812

U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
	4,796,194	01/03/89	Atherton			08/20/86
	5,089,970	02/18/92	Lee et al.			10/05/89
	5,108,570	04/28/92	Wang			03/30/90
	5,220,517	06/15/93	Sierk et al.			08/31/90
	5,236,868	08/17/93	Nulman			04/20/90
	5,260,868	11/09/93	Gupta et al.			10/15/91
	5,295,242	03/15/94	Mashruwala et al.			11/02/90
	5,309,221	05/03/94	Fischer et al.			12/31/91
	5,329,463	07/12/94	Sierk et al.			01/13/93
	5,367,624	11/22/94	Cooper			06/11/93
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	5,402,367	03/28/95	Sullivan et al.			07/19/93
	5,408,405	04/18/95	Mozumder et al.			09/20/93
	5,410,473	04/25/95	Kaneko et al.			12/16/92


FOREIGN PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
	01-283934	11/15/89	Japan			X	
	2,050,247	08/29/91	Canada			X	


OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

	Dishon, G., D. Eylon, M. Finarov, and A. Shulman. "Dielectric CMP Advanced Process Control Based on Integrated Monitoring." Ltd. Rehoveth, Israel: Nova Measuring Instruments.
	Runyan, W. R., and K. E. Bean. 1990. "Semiconductor Integrated Circuit Processing Technology." pg. 48. Reading, Massachusetts: Addison-Wesley Publishing Company.
EXAMINER	DATE CONSIDERED


EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

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U.S. PATENT DOCUMENTS							
EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE	
	5,490,097	02/06/96	Swenson et al.			08/06/93	
	5,495,417	02/27/96	Fuduka et al.			03/16/93	
	5,497,316	03/05/96	Sierk et al.			04/04/95	
	5,503,707	04/02/96	Maung et al.			09/22/93	
	5,508,947	04/16/96	Sierk et al.			05/13/94	
	5,629,216	05/13/97	Wijaranakula et al.			02/27/96	
	5,657,254	08/12/97	Sierk et al.			04/15/96	
	5,661,669	08/26/97	Mozumder et al.			06/07/95	
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	5,698,989	12/16/97	Nulman			09/13/96	
	5,719,495	02/17/98	Moslehi			06/05/96	
	5,740,429	04/14/98	Wang et al.			07/07/95	
	5,751,582	05/12/98	Saxena et al.			09/24/96	
	5,754,297	05/19/98	Nulman			04/14/97	
	5,764,543	06/09/98	Kennedy			06/16/95	
FOREIGN PATENT DOCUMENTS							
EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
	2,165,847	08/29/91	Canada			X	
	2,194,855	08/29/91	Canada			X	
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)							
	Zorich, Robert. 1991. <i>Handbook of Quality Integrated Circuit Manufacturing</i> . pp. 464-498 San Diego, California: Academic Press, Inc.						
	Rampalli, Prasad, Arakere Ramesh, and Nimish Shah. 1991. <i>CEPT—A Computer-Aided Manufacturing Application for Managing Equipment Reliability and Availability in the Semiconductor Industry</i> . New York, New York: IEEE.						
EXAMINER				DATE CONSIDERED			

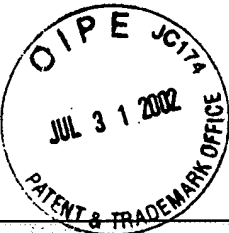
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U.S. PATENT DOCUMENTS							
EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE	
	5,808,303	09/15/98	Schlagheck et al.			01/29/97	
	5,838,595	11/17/98	Sullivan et al.			11/25/96	
	5,883,437	03/16/99	Maruyama et al.			12/28/95	
	5,910,011	06/08/99	Cruse			05/12/97	
	6,054,379	04/25/00	Yau et al.			02/11/98	
FOREIGN PATENT DOCUMENTS							
EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation Yes No	
	05-151231	06/18/93	Japan				X
	05-216896	08/27/93	Japan				X
	05-266029	10/15/93	Japan				X
	06-110894	04/22/94	Japan				X
	06-176994	06/24/94	Japan				X
	06-252236	09/09/94	Japan				X
	06-260380	09/16/94	Japan				X
	08-149583	06/07/96	Japan			X	
	09-34535	02/07/97	Japan			X	
	EP 0877308 A2	11/11/98	Europe			X	
	11-67853	03/09/99	Japan			X	
	1072967A3	11/21/01	Europe			X	
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)							
	Moyne, James R., Nauman Chaudhry, and Roland Telfeyan. 1995. "Adaptive Extensions to a Multi-Branch Run-to-Run Controller for Plasma Etching." <i>Journal of Vacuum Science and Technology</i> . Ann Arbor, Michigan: University of Michigan Display Technology Manufacturing Center.						
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U.S. PATENT DOCUMENTS							
EXAMINER'S INITIALS	PATENT APPLICATION NO.	FILING DATE	NAME	TITLE	CLASS	SUB- CLASS	
	09/363,966	07/29/99	Arackaparambil et al.	Computer Integrated Manufacturing Techniques			
	09/469,227	12/22/99	Somekh et al.	Multi-Tool Control System, Method and Medium			
	09/619,044	07/19/00	Yuan	System and Method of Exporting or Importing Object Data in a Manufacturing Execution System			
	09/637,620	08/11/00	Chi et al.	Generic Interface Builder			
	09/656,031	09/06/00	Chi et al.	Dispatching Component for Associating Manufacturing Facility Service Requestors with Service Providers			
FOREIGN PATENT DOCUMENTS							
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						Yes	No
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)							
	Zhou, Zhen-Hong and Rafael Reif. August 1995. "Epi-Film Thickness Measurements Using Emission Fourier Transform Infrared Spectroscopy—Part II: Real-Time <i>in Situ</i> Process Monitoring and Control." IEEE Transactions on Semiconductor Manufacturing, Vol. 8, No. 3.						
	Telfeyan, Roland, James Moyne, Nauman Chaudhry, James Pugmire, Scott Shellman, Duane Boning, William Moyne, Arnon Hurwitz, and John Taylor. October 1995. "A Multi-Level Approach to the Control of a Chemical-Mechanical Planarization Process." Minneapolis, Minnesota: 42 nd National Symposium of the American Vacuum Society.						
	Chang, E., B. Stine, T. Maung, R. Divecha, D. Boning, J. Chung, K. Chang, G. Ray, D. Bradbury, O. S. Nakagawa, S. Oh, and D. Bartelink. December 1995. "Using a Statistical Metrology Framework to Identify Systematic and Random Sources of Die- and Wafer-level ILD Thickness Variation in CMP Processes." Washington, D.C.: International Electron Devices Meeting.						
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EXAMINER'S INITIALS	PATENT APPLICATION NO.	FILING DATE	NAME	TITLE	CLASS	SUB- CLASS	
	09/655,542	09/06/00	Yuan	System, Method and Medium for Defining Palettes to Transform an Application Program Interface for a Service			
	09/725,908	11/30/00	Chi et al.	Dynamic Subject Information Generation in Message Services of Distributed Object Systems			
	09/800,980	03/08/01	Hawkins et al.	Dynamic and Extensible Task Guide			
	09/811,667	03/20/01	Yuan et al.	Fault Tolerant and Automated Computer Software Workflow			
	09/927,444	08/13/01	Ward et al.	Dynamic Control of Wafer Processing Paths in Semiconductor Manufacturing Processes			
	09/928,473	08/14/01	Koh	Tool Services Layer for Providing Tool Service Functions in Conjunction with Tool Functions			
FOREIGN PATENT DOCUMENTS							
EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUB- CLASS	Translation	
						Yes	No
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)							
	Dishon, G., M. Finarov, R. Kipper, J.W. Curry, T. Schraub, D. Trojan, 4 th Stambaugh, Y. Li and J. Ben-Jacob. February 1996. "On-Line Integrated Metrology for CMP Processing." Santa Clara, California: VMIC Speciality Conferences, 1 st International CMP Planarization Conference.						
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	Boning, Duane, William Moyne, Taber Smith, James Moyne, Roland Telfeyan, Arnon Hurwitz, Scott Shellman, and John Taylor. October 1996. "Run by Run Control of Chemical-Mechanical Polishing." <i>IEEE Trans. CPMT (C)</i> , Vol. 19, No. 4, pp. 307-314.						
	SEMI. [1986] 1996. "Standard for Definition and Measurement of Equipment Reliability, Availability, and Maintainability (RAM)." SEMI E10-96.						
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	09/928,474	08/14/01	Krishnamurthy et al.	Experiment Management System, Method and Medium			
	09/943,383	08/31/01	Shanmugasundram et al.	In Situ Sensor Based Control of Semiconductor Processing Procedure			
	09/943,955	08/31/01	Shanmugasundram et al.	Feedback Control of a Chemical Mechanical Polishing Device Providing Manipulation of Removal Rate Profiles			
FOREIGN PATENT DOCUMENTS							
EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUB- CLASS	Translation	
						Yes	No
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)							
	Van Zant, Peter. 1997. <i>Microchip Fabrication: A Practical Guide to Semiconductor Processing</i> . Third Edition, pp. 472-478. New York, New York: McGraw-Hill.						
	Campbell, W. Jarrett, and Anthony J. Toprac. February 11-12, 1998. "Run-to-Run Control in Microelectronics Manufacturing." Advanced Micro Devices, TWMCC.						
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	Consilium. August 1998. <i>Quality Management Component: QMC™ and QMC-Link™ Overview</i> . Mountain View, California: Consilium, Inc.						
	Chemali, Chadi El, James Moyne, Kareemullah Khan, Rock Nadeau, Paul Smith, John Colt, Jonathan Chapple-Sokol, and Tarun Parikh. November 1998. "Multizone Uniformity Control of a CMP Process Utilizing a Pre and Post-Measurement Strategy." Seattle, Washington: SEMETECH Symposium.						
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	Khan, Kareemullah, Victor Solakhain, Anthony Ricci, Tier Gu, and James Moyne. 1998. "Run-to-Run Control of ITO Deposition Process." Ann Arbor, Michigan.						
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OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)							
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